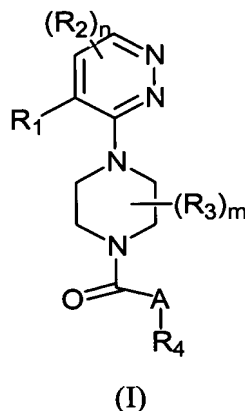


What is claimed is:

1. A compound of formula (I):



- 5 or a pharmaceutically acceptable salt thereof, wherein:

A is -NH-, -N(C₁-C₆)alkyl-, or -N-(O-C₁-C₆ alkyl)-;

R₁ is -halo, -CH₃, -NO₂, -CN, -OH, -OCH₃, -NH₂, C(halo)₃, -CH(halo)₂, or -CH₂(halo);

each R₂ is independently:

- 10 (a) -halo, -OH, or -NH₂;

(b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or
15 more R₅ groups; or

(c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

each R₃ is independently:

- (a) -halo, -CN, -OH, -NO₂, or -NH₂;

20 (b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or

(c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

R₄ is:

(a) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or

(b) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

each R₅ is independently -CN, -OH, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

each R₆ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, -CH₂(halo), -CN, -OH, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

each R₇ is independently -H, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, or -CH₂(halo);

each halo is independently -F, -Cl, -Br, or -I;

n is an integer ranging from 0 to 2; and

m is an integer ranging from 0 to 2.

2. The compound of claim 1, wherein:

n is 0;

m is 0; and

R₄ is phenyl.

3. The compound of claim 2, wherein the R₄ phenyl is unsubstituted.

4. The compound of claim 2, wherein the R₄ phenyl is substituted at the 4-position.

5. The compound of claim 4, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
6. The compound of claim 5, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
- 5 7. The compound of claim 5, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
8. The compound of claim 4, wherein the R₄ phenyl is substituted with a -CF₃ group.
9. The compound of claim 4, wherein the R₄ phenyl is substituted with a -OCF₃ group.
- 10 10. The compound of claim 1, wherein:
n is 0;
m is 1;
R₃ is methyl; and
R₄ is phenyl.
- 15 11. The compound of claim 10, wherein the R₄ phenyl is unsubstituted.
12. The compound of claim 10, wherein the R₄ phenyl is substituted at the 4-position.
13. The compound of claim 12, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
- 20 14. The compound of claim 13, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
15. The compound of claim 13, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
- 25 16. The compound of claim 12, wherein the phenyl is substituted with a -CF₃ group.

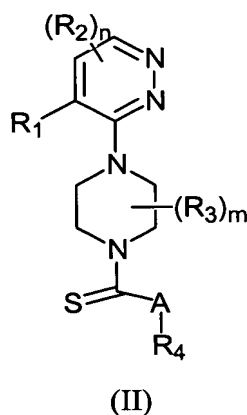
17. The compound of claim 12, wherein the phenyl is substituted with a -OCF₃ group.

18. The compound of claim 1, wherein A is -NH-.

19. The compound of claim 1, wherein A is -N(C₁-C₆)alkyl-.

5 20. The compound of claim 1, wherein A is -N-(O-C₁-C₆ alkyl)-.

21. A compound of formula (II):



or a pharmaceutically acceptable salt thereof, wherein:

10 A is -N(O-C₁-C₆ alkyl)-, -CH₂-, -CH₂CH₂-, or -CH=CH-;

R₁ is -halo, -CH₃, -NO₂, -CN, -OH, -OCH₃, -NH₂, C(halo)₃, -CH(halo)₂, or -CH₂(halo);

each R₂ is independently:

(a) -halo, -CN, -OH, -NO₂, or -NH₂;

15 (b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or

20 (c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

each R₃ is independently:

(a) -halo, -CN, -OH, -NO₂, or -NH₂;

(b) $-(C_1-C_{10})$ alkyl, $-(C_2-C_{10})$ alkenyl, $-(C_2-C_{10})$ alkynyl, $-(C_3-C_{10})$ cycloalkyl, $-(C_8-C_{14})$ bicycloalkyl, $-(C_8-C_{14})$ tricycloalkyl, $-(C_5-C_{10})$ cycloalkenyl, $-(C_8-C_{14})$ bicycloalkenyl, $-(C_8-C_{14})$ tricycloalkenyl, $-(3- \text{ to } 7\text{-membered})$ heterocycle, or $-(7- \text{ to } 10\text{-membered})$ bicycloheterocycle, each of which is unsubstituted or substituted with one or
5 more R_5 groups; or

(c) -phenyl, -naphthyl, $-(C_{14})$ aryl or $-(5- \text{ to } 10\text{-membered})$ heteroaryl, each of which is unsubstituted or substituted with one or more R_6 groups;

R_4 is:

(a) $-(C_1-C_{10})$ alkyl, $-(C_2-C_{10})$ alkenyl, $-(C_2-C_{10})$ alkynyl, $-(C_3-C_{10})$ cycloalkyl, $-(C_8-C_{14})$ bicycloalkyl, $-(C_8-C_{14})$ tricycloalkyl, $-(C_5-C_{10})$ cycloalkenyl, $-(C_8-C_{14})$ bicycloalkenyl, $-(C_8-C_{14})$ tricycloalkenyl, $-(3- \text{ to } 7\text{-membered})$ heterocycle, or $-(7- \text{ to } 10\text{-membered})$ bicycloheterocycle, each of which is unsubstituted or substituted with one or
10 more R_5 groups; or

(b) -phenyl, -naphthyl, $-(C_{14})$ aryl or $-(5- \text{ to } 10\text{-membered})$ heteroaryl,
15 each of which is unsubstituted or substituted with one or more R_6 groups;

each R_5 is independently -CN, -OH, $-(C_1-C_6)$ alkyl, $-(C_2-C_6)$ alkenyl, -halo, $-N_3$, $-NO_2$, $-N(R_7)_2$, $-CH=NR_7$, $-NR_7OH$, $-OR_7$, $-COR_7$, $-C(O)OR_7$, $-OC(O)R_7$, $-OC(O)OR_7$, $-SR_7$, $-S(O)R_7$, or $-S(O)_2R_7$;

each R_6 is independently $-(C_1-C_6)$ alkyl, $-(C_2-C_6)$ alkenyl, $-(C_2-C_6)$ alkynyl, $-(C_3-C_8)$ cycloalkyl, $-(C_5-C_8)$ cycloalkenyl, -phenyl, $-(3- \text{ to } 5\text{-membered})$ heterocycle, $-C(halo)_3$, $-CH(halo)_2$, $-CH_2(halo)$, -CN, -OH, -halo, $-N_3$, $-NO_2$, $-N(R_7)_2$, $-CH=NR_7$, $-NR_7OH$, $-OR_7$, $-COR_7$, $-C(O)OR_7$, $-OC(O)R_7$, $-OC(O)OR_7$, $-SR_7$, $-S(O)R_7$, or $-S(O)_2R_7$;

each R_7 is independently -H, $-(C_1-C_6)$ alkyl, $-(C_2-C_6)$ alkenyl, $-(C_2-C_6)$ alkynyl, $-(C_3-C_8)$ cycloalkyl, $-(C_5-C_8)$ cycloalkenyl, -phenyl, $-(3- \text{ to } 5\text{-membered})$ heterocycle, $-C(halo)_3$, $-CH(halo)_2$, or $CH_2(halo)$;
25

each halo is independently -F, -Cl, -Br, or -I;

n is an integer ranging from 0 to 2; and

m is an integer ranging from 0 to 2.

22. The compound of claim 21, wherein:

30 n is 0;

m is 0; and

R₄ is phenyl.

23. The compound of claim 22, wherein the R₄ phenyl is unsubstituted.

24. The compound of claim 22, wherein the R₄ phenyl is substituted at the 4-position.

5 25. The compound of claim 24, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.

26. The compound of claim 25, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.

10 27. The compound of claim 25, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.

28. The compound of claim 24, wherein the R₄ phenyl is substituted with a -CF₃ group.

29. The compound of claim 24, wherein the R₄ phenyl is substituted with a -OCF₃ group.

15 30. The compound of claim 21, wherein:
n is 0;
m is 1;
R₃ is methyl; and
R₄ is phenyl.

20 31. The compound of claim 30, wherein the R₄ phenyl is unsubstituted.

32. The compound of claim 30, wherein the R₄ phenyl is substituted at the 4-position.

33. The compound of claim 32, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.

25 34. The compound of claim 33, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.

35. The compound of claim 33, wherein the $-(C_1-C_6)$ alkyl group is an *iso*-propyl group.

36. The compound of claim 32, wherein the R_4 phenyl is substituted with a $-CF_3$ group.

5 37. The compound of claim 32, wherein the R_4 phenyl is substituted with a $-OCF_3$ group.

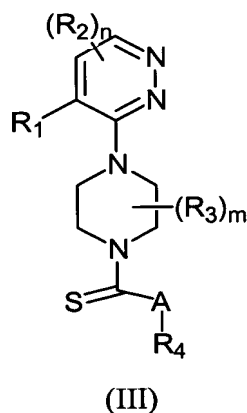
38. The compound of claim 21, wherein A is $-N(O-C_1-C_6 \text{ alkyl})-$.

39. The compound of claim 21, wherein A is $-CH_2-$.

40. The compound of claim 21, wherein A is $-CH_2CH_2-$.

10 41. The compound of claim 21, wherein A is $-CH=CH-$.

42. A compound of formula (III):



or a pharmaceutically acceptable salt thereof, wherein:

15 A is $-NH-$ or $-N(C_1-C_6 \text{ alkyl})-$;

R_1 is $-halo$, $-CH_3$, $-NO_2$, $-CN$, $-OH$, $-OCH_3$, $-NH_2$, $C(halo)_3$, $-CH(halo)_2$, or $-CH_2(halo)$;

each R_2 is independently:

(a) $-halo$, $-OH$, or $-NH_2$;

20 (b) $-(C_1-C_{10})alkyl$, $-(C_2-C_{10})alkenyl$, $-(C_2-C_{10})alkynyl$, $-(C_3-C_{10})cycloalkyl$, $-(C_8-C_{14})bicycloalkyl$, $-(C_8-C_{14})tricycloalkyl$, $-(C_5-C_{10})cycloalkenyl$, $-(C_8-C_{14})bicycloalkenyl$, $-(C_8-C_{14})tricycloalkenyl$, $-(3- \text{ to } 7\text{-membered})heterocycle$, or $-(7- \text{ to } 10\text{-})$

membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or

(c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

5 each R₃ is independently:

(a) -halo, -CN, -OH, -NO₂, or -NH₂;

(b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or

(c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

R₄ is:

15 (a) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or

20 (b) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl, each of which is unsubstituted or substituted with one or more R₆ groups;

each R₅ is independently -CN, -OH, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

25 each R₆ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, -CH₂(halo), -CN, -OH, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

30 each R₇ is independently -H, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, -CH₂(halo);

each halo is independently -F, -Cl, -Br, or -I;

n is an integer ranging from 0 to 2; and

m is an integer ranging from 0 to 2.

43. The compound of claim 42, wherein:

n is 0;

m is 0; and

R₄ is phenyl.

44. The compound of claim 43, wherein the R₄ phenyl is unsubstituted.

45. The compound of claim 43, wherein the R₄ phenyl is substituted at the 4-position.

46. The compound of claim 45, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.

47. The compound of claim 46, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.

48. The compound of claim 46, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.

49. The compound of claim 45, wherein the R₄ phenyl is substituted with a -CF₃ group.

50. The compound of claim 45, wherein the R₄ phenyl is substituted with a -OCF₃ group.

51. The compound of claim 42, wherein:

n is 0;

m is 1;

R₃ is methyl; and

R₄ is phenyl.

52. The compound of claim 51, wherein the R₄ phenyl is unsubstituted.

53. The compound of claim 51, wherein the R₄ phenyl is substituted at the 4-position.
54. The compound of claim 53, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
55. The compound of claim 54, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
56. The compound of claim 54, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
57. The compound of claim 53, wherein the R₄ phenyl is substituted with a -CF₃ group.
58. The compound of claim 53, wherein the R₄ phenyl is substituted with a -OCF₃ group.
59. The compound of claim 42, wherein A is -NH-.
60. The compound of claim 42, wherein A is -N(C₁-C₆ alkyl)-.
61. A composition comprising an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1 and a pharmaceutically acceptable carrier or excipient.
62. A composition comprising an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21 and a pharmaceutically acceptable carrier or excipient.
63. A composition comprising an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42 and a pharmaceutically acceptable carrier or excipient.
64. A method for treating pain in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1.

65. A method for treating pain in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21.

5 66. A method for treating pain in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42.

67. A method for treating urinary incontinence in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1.

10 68. A method for treating urinary incontinence in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21.

15 69. A method for treating urinary incontinence in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42.

70. A method for treating an ulcer in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1.

20 71. A method for treating an ulcer in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21.

72. A method for treating an ulcer in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42.

25 73. A method for treating irritable-bowel syndrome in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1.

74. A method for treating irritable-bowel syndrome in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21.
- 5 75. A method for treating irritable-bowel syndrome in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42.
76. A method for treating inflammatory-bowel disease in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1.
- 10 77. A method for treating inflammatory-bowel disease in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21.
78. A method for treating inflammatory-bowel disease in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42.
- 15 79. A method for inhibiting VR1 function in a cell comprising contacting a cell capable of expressing VR1 with an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 1.
80. A method for inhibiting VR1 function in a cell comprising contacting a cell capable of expressing VR1 with an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 21.
- 20 81. A method for inhibiting VR1 function in a cell comprising contacting a cell capable of expressing VR1 with an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 42.
- 25 82. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 1.
83. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 21.

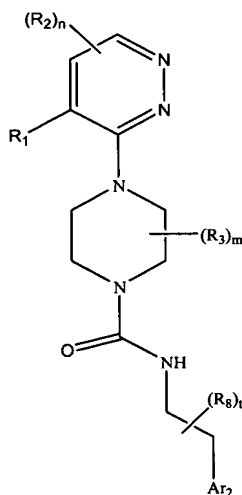
84. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 42.

85. A method for preparing a composition, comprising the step of admixing a compound or a pharmaceutically acceptable salt of the compound of claim 1 and a pharmaceutically acceptable carrier or excipient.

86. A method for preparing a composition, comprising the step of admixing a compound or a pharmaceutically acceptable salt of the compound of claim 21 and a pharmaceutically acceptable carrier or excipient.

87. A method for preparing a composition, comprising the step of admixing a compound or a pharmaceutically acceptable salt of the compound of claim 42 and a pharmaceutically acceptable carrier or excipient.

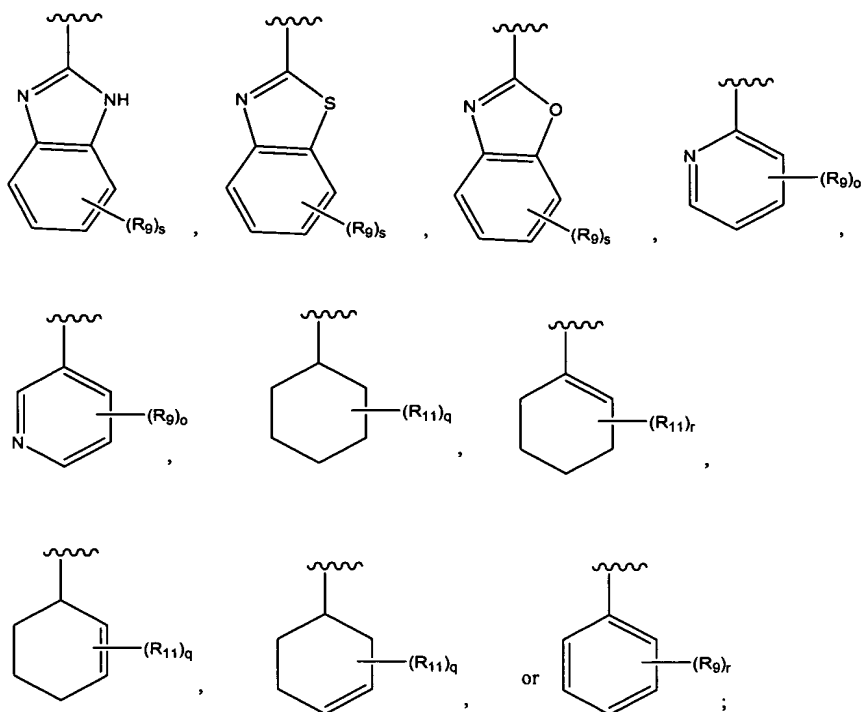
88. A compound of formula formula (IV):



(IV)

or a pharmaceutically acceptable salt thereof, wherein:

Ar_2 is



R_1 is -H, -halo, -CH₃, -NO₂, -CN, -OH, -OCH₃, -NH₂, C(halo)₃, -CH(halo)₂,

or

-CH₂(halo);

5

each R_2 is independently:

(a) -halo, -CN, -OH, -NO₂, or -NH₂;

(b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R_5 groups; or

10

(c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl,

each of which is unsubstituted or substituted with one or more R_6 groups;

each R_3 is independently:

15

(a) -halo, -CN, -OH, -NO₂, or -NH₂;

(b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R_5 groups; or

20

(c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl,

each of which is unsubstituted or substituted with one or more R_6 groups;

each R₅ is independently -CN, -OH, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

5 each R₆ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, -CH₂(halo), -CN, -OH, -halo, -N₃, -NO₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

10 each R₇ is independently -H, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, -CH₂(halo);

each R₈ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -C(halo)₃, -CH(halo)₂, or CH₂(halo);

15 each R₉ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -C(halo)₃, -CH(halo)₂, or CH₂(halo), -CN, -OH, -halo, -N₃, -NO₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

20 each R₁₁ is independently -CN, -OH, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;

each halo is independently -F, -Cl, -Br, or -I;

n is an integer ranging from 0 to 2;

m is 0 or 1;

o is an integer ranging from 0 to 4;

25 q is an integer ranging from 0 to 6;

r is an integer ranging from 0 to 5;

s is an integer ranging from 0 to 4; and

t is an integer ranging from 0 to 2.

89. A composition comprising an effective amount of the compound or a
30 pharmaceutically acceptable salt of the compound of claim 87 and a pharmaceutically acceptable carrier or excipient.

90. A method for treating pain in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 87.

91. A method for treating urinary incontinence in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 87.

5 92. A method for treating an ulcer in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 87.

93. A method for treating irritable-bowel syndrome in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 87.

10 94. A method for treating inflammatory-bowel disease in an animal, comprising administering to an animal in need thereof an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 87.
B65

15 95. A method for inhibiting VR1 function in a cell, comprising contacting a cell capable of expressing VR1 with an effective amount of the compound or a pharmaceutically acceptable salt of the compound of claim 87.

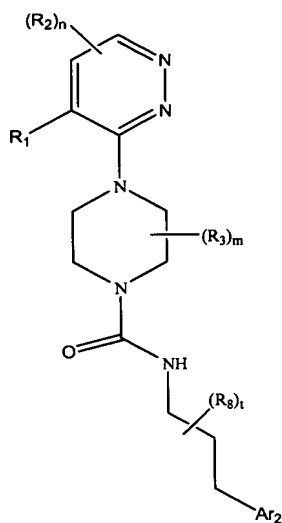
96. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 87.

20 97. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 87.

98. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 87.

25 99. A method for preparing a composition, comprising the step of admixing a compound or a pharmaceutically acceptable salt of the compound of claim 87 and a pharmaceutically acceptable carrier or excipient.

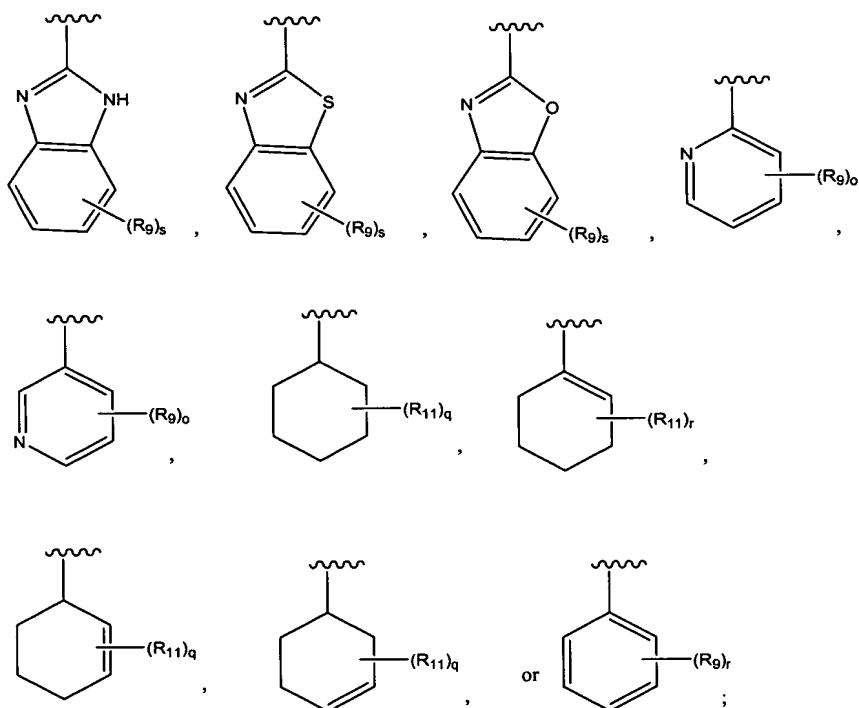
100. A compound of formula (V):



(V)

or a pharmaceutically acceptable salts thereof, wherein:

Ar₂ is



5

R₁ is -H, -halo, -CH₃, -NO₂, -CN, -OH, -OCH₃, -NH₂, C(halo)₃, -CH(halo)₂,

or

-CH₂(halo);

each R₂ is independently:

10

(a) -halo, -CN, -OH, -NO₂, or -NH₂;

(b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-

- C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or
- (c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl,
- 5 each of which is unsubstituted or substituted with one or more R₆ groups;
- each R₃ is independently:
- (a) -halo, -CN, -OH, -NO₂, or -NH₂;
- (b) -(C₁-C₁₀)alkyl, -(C₂-C₁₀)alkenyl, -(C₂-C₁₀)alkynyl, -(C₃-C₁₀)cycloalkyl, -(C₈-C₁₄)bicycloalkyl, -(C₈-C₁₄)tricycloalkyl, -(C₅-C₁₀)cycloalkenyl, -(C₈-C₁₄)bicycloalkenyl, -(C₈-C₁₄)tricycloalkenyl, -(3- to 7-membered)heterocycle, or -(7- to 10-membered)bicycloheterocycle, each of which is unsubstituted or substituted with one or more R₅ groups; or
- (c) -phenyl, -naphthyl, -(C₁₄)aryl or -(5- to 10-membered)heteroaryl,
- each of which is unsubstituted or substituted with one or more R₆ groups;
- 15 each R₅ is independently -CN, -OH, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;
- each R₆ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -
- 20 C(halo)₃, -CH(halo)₂, -CH₂(halo), -CN, -OH, -halo, -N₃, -NO₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;
- each R₇ is independently -H, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -
- C(halo)₃, -CH(halo)₂, -CH₂(halo);
- 25 each R₈ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -(3- to 5-membered)heterocycle, -
- C(halo)₃, -CH(halo)₂, or CH₂(halo);
- each R₉ is independently -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -(C₃-C₈)cycloalkyl, -(C₅-C₈)cycloalkenyl, -phenyl, -C(halo)₃, -CH(halo)₂, or CH₂(halo), -
- 30 CN, -OH, -halo, -N₃, -NO₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;
- each R₁₁ is independently -CN, -OH, -(C₁-C₆)alkyl, -(C₂-C₆)alkenyl, -(C₂-C₆)alkynyl, -halo, -N₃, -NO₂, -N(R₇)₂, -CH=NR₇, -NR₇OH, -OR₇, -COR₇, -C(O)OR₇, -OC(O)R₇, -OC(O)OR₇, -SR₇, -S(O)R₇, or -S(O)₂R₇;
- 35 each halo is independently -F, -Cl, -Br, or -I;

n is an integer ranging from 0 to 2;
m is 0 or 1;
o is an integer ranging from 0 to 4;
q is an integer ranging from 0 to 6;
5 r is an integer ranging from 0 to 5;
s is an integer ranging from 0 to 4; and
t is an integer ranging from 0 to 2.

101. A composition comprising an effective amount of the compound or a
pharmaceutically acceptable salt of the compound of claim 99 and a pharmaceutically
10 acceptable carrier or excipient.

102. A method for treating pain in an animal, comprising administering to an
animal in need thereof an effective amount of the compound or a pharmaceutically
acceptable salt of the compound of claim 99.

103. A method for treating urinary incontinence in an animal, comprising
15 administering to an animal in need thereof an effective amount of the compound or a
pharmaceutically acceptable salt of the compound of claim 99.

104. A method for treating an ulcer in an animal, comprising administering to an
animal in need thereof an effective amount of the compound or a pharmaceutically
acceptable salt of the compound of claim 99.

20 105. A method for treating irritable-bowel syndrome in an animal, comprising
administering to an animal in need thereof an effective amount of the compound or a
pharmaceutically acceptable salt of the compound of claim 99.

106. A method for treating inflammatory-bowel disease in an animal, comprising
administering to an animal in need thereof an effective amount of the compound or a
25 pharmaceutically acceptable salt of the compound of claim 99.

107. A method for inhibiting VR1 function in a cell, comprising contacting a cell
capable of expressing VR1 with an effective amount of the compound or a pharmaceutically
acceptable salt of the compound of claim 99.

108. A kit comprising a container containing an effective amount of a compound
30 or a pharmaceutically acceptable salt of the compound of claim 99.

109. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 99.
110. A kit comprising a container containing an effective amount of a compound or a pharmaceutically acceptable salt of the compound of claim 99.
- 5 111. A method for preparing a composition, comprising the step of admixing a compound or a pharmaceutically acceptable salt of the compound of claim 99 and a pharmaceutically acceptable carrier or excipient.
112. The compound of claim 1, wherein:
n is 0;
10 m is 1;
R₃ is -CH₃;
R₁ is -halo; and
R₄ is phenyl.
113. The compound of claim 112, wherein the R₄ phenyl is unsubstituted.
- 15 114. The compound of claim 112, wherein the R₄ phenyl is substituted at the 4-position.
115. The compound of claim 114, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.
- 20 116. The compound of claim 115, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
117. The compound of claim 115, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
118. The compound of claim 114, wherein the phenyl is substituted with a -CF₃ group.
- 25 119. The compound of claim 114, wherein the phenyl is substituted with a -OCF₃ group.
120. The compound of claim 112, wherein R₁ is -Cl.
121. The compound of claim 120, wherein the R₄ phenyl is unsubstituted.

122. The compound of claim 120, wherein the R₄ phenyl is substituted at the 4-position.
123. The compound of claim 122, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
- 5 124. The compound of claim 123, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
125. The compound of claim 123, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
- 10 126. The compound of claim 122, wherein the phenyl is substituted with a -CF₃ group.
127. The compound of claim 122, wherein the phenyl is substituted with a -OCF₃ group.
128. The compound of claim 112, wherein R₁ is -F.
- 15 129. The compound of claim 128, wherein the R₄ phenyl is unsubstituted.
130. The compound of claim 128, wherein the R₄ phenyl is substituted at the 4-position.
131. The compound of claim 130, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
- 20 132. The compound of claim 131, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
133. The compound of claim 131, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
- 25 134. The compound of claim 130, wherein the phenyl is substituted with a -CF₃ group.
135. The compound of claim 130, wherein the phenyl is substituted with a -OCF₃ group.

136. The compound of claim 1, wherein:
n is 0;
m is 1;
R₃ is -CH₃;
5 R₁ is -CH₃; and
R₄ is phenyl.
137. The compound of claim 136, wherein the R₄ phenyl is unsubstituted.
138. The compound of claim 136, wherein the R₄ phenyl is substituted at the 4-position.
- 10 139. The compound of claim 138, wherein the R₄ phenyl is substituted with a -
(C₁-C₆) alkyl group.
140. The compound of claim 139, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
141. The compound of claim 139, wherein the -(C₁-C₆) alkyl group is an *iso*-
15 propyl group.
142. The compound of claim 138, wherein the phenyl is substituted with a -CF₃ group.
- 20 143. The compound of claim 138, wherein the phenyl is substituted with a -OCF₃ group.
144. The compound of claim 21, wherein:
n is 0;
m is 1;
R₃ is -CH₃;
25 R₁ is -halo; and
R₄ is phenyl.
145. The compound of claim 144, wherein the R₄ phenyl is unsubstituted.
146. The compound of claim 144, wherein the R₄ phenyl is substituted at the 4-position.

147. The compound of claim 146, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.
148. The compound of claim 147, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
- 5 149. The compound of claim 147, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
150. The compound of claim 146, wherein the phenyl is substituted with a -CF₃ group.
151. The compound of claim 146, wherein the phenyl is substituted with a -OCF₃ group.
- 10 152. The compound of claim 144, wherein R₁ is -Cl.
153. The compound of claim 152, wherein the R₄ phenyl is unsubstituted.
154. The compound of claim 152, wherein the R₄ phenyl is substituted at the 4-
- 15 position.
155. The compound of claim 154, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.
156. The compound of claim 155, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
- 20 157. The compound of claim 155, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
158. The compound of claim 154, wherein the phenyl is substituted with a -CF₃ group.
159. The compound of claim 154, wherein the phenyl is substituted with a -OCF₃ group.
- 25 160. The compound of claim 144, wherein R₁ is -F.
161. The compound of claim 160, wherein the R₄ phenyl is unsubstituted.

162. The compound of claim 160, wherein the R₄ phenyl is substituted at the 4-position.
163. The compound of claim 162, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
- 5 164. The compound of claim 163, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
165. The compound of claim 163, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
- 10 166. The compound of claim 162, wherein the phenyl is substituted with a -CF₃ group.
167. The compound of claim 162, wherein the phenyl is substituted with a -OCF₃ group.
- 15 168. The compound of claim 21, wherein:
n is 0;
m is 1;
R₁ is -CH₃; and
R₄ is phenyl.
169. The compound of claim 168, wherein the R₄ phenyl is unsubstituted.
- 20 170. The compound of claim 168, wherein the R₄ phenyl is substituted at the 4-position.
171. The compound of claim 170, wherein the R₄ phenyl is substituted with a -(C₁-C₆) alkyl group.
172. The compound of claim 171, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
- 25 173. The compound of claim 171, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.

174. The compound of claim 170, wherein the phenyl is substituted with a -CF₃ group.
- 5 175. The compound of claim 170, wherein the phenyl is substituted with a -OCF₃ group.
176. The compound of claim 42, wherein:
n is 0;
m is 1;
R₃ is -CH₃;
10 R₁ is -halo; and
R₄ is phenyl.
177. The compound of claim 176, wherein the R₄ phenyl is unsubstituted.
178. The compound of claim 176, wherein the R₄ phenyl is substituted at the 4-position.
- 15 179. The compound of claim 178, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.
180. The compound of claim 179, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
181. The compound of claim 179, wherein the -(C₁-C₆) alkyl group is an *iso*-
20 propyl group.
182. The compound of claim 178, wherein the phenyl is substituted with a -CF₃ group.
183. The compound of claim 178, wherein the phenyl is substituted with a -OCF₃ group.
- 25 184. The compound of claim 176, wherein R₁ is -Cl.
185. The compound of claim 184, wherein the R₄ phenyl is unsubstituted.
186. The compound of claim 184, wherein the R₄ phenyl is substituted at the 4-position.

187. The compound of claim 186, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.
188. The compound of claim 187, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
- 5 189. The compound of claim 187, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
190. The compound of claim 186, wherein the phenyl is substituted with a -CF₃ group.
191. The compound of claim 186, wherein the phenyl is substituted with a -OCF₃ group.
- 10 192. The compound of claim 176, wherein R₁ is -F.
193. The compound of claim 192, wherein the R₄ phenyl is unsubstituted.
194. The compound of claim 192, wherein the R₄ phenyl is substituted at the 4-
- 15 position.
195. The compound of claim 194, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.
196. The compound of claim 195, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.
- 20 197. The compound of claim 195, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.
198. The compound of claim 194, wherein the phenyl is substituted with a -CF₃ group.
199. The compound of claim 194, wherein the phenyl is substituted with a -OCF₃ group.
- 25 200. The compound of claim 42, wherein:
n is 0;
m is 1;

R₃ is -CH₃;
R₁ is -CH₃; and
R₄ is phenyl.

201. The compound of claim 200, wherein the R₄ phenyl is unsubstituted.

5 202. The compound of claim 200, wherein the R₄ phenyl is substituted at the 4-position.

203. The compound of claim 202, wherein the R₄ phenyl is substituted with a - (C₁-C₆) alkyl group.

10 204. The compound of claim 203, wherein the -(C₁-C₆) alkyl group is a *tert*-butyl group.

205. The compound of claim 203, wherein the -(C₁-C₆) alkyl group is an *iso*-propyl group.

15 206. The compound of claim 202, wherein the phenyl is substituted with a -CF₃ group.

207. The compound of claim 202, wherein the phenyl is substituted with a -OCF₃ group.